REMARKS

The present Response After Final Rejection Pursuant to 37 CFR 1.116 is filed in response to the Final Official Action of May 4, 2004 and within two months of the mailing date of the Final Office Action. The Applicant respectfully requests entry of the present Response After Final before reconsideration of the present Application and allowance of the present Application in light of the above submitted amendments and the following remarks, of an Advisory Action if necessary.

Claims 15-27 are presently pending in the Application and the Examiner has rejected claims 15-27 under 35 U.S.C. § 112 and under 35 U.S.C. §§ 102 and 103 over prior art cited by the Examiner. The Examiner has also objected to the Drawings for an informality in Fig. 2, and a previously submitted amendment as introducing new matter not supported buy the Specification as originally filed.

First considering the Examiner's objection to Fig. 2, the Examiner has pointed out that the term "torque transmitting hub" therein should correctly be "torque measuring hub".

In response, the Applicant has amended Fig. 2 accordingly in the accompanying Letter to the Official Draftsman by replacing the term "torque transmitting hub" with the term "torque measuring hub", thereby addressing and overcoming the Examiner's stated grounds for objection to the Drawings. The Applicant therefore respectfully requests that the Examiner reconsider and withdraw the objection to the Drawings.

New formal drawings, incorporating the requested amendments, will follow once the requested drawing amendments are approved by the Examiner. If any further amendment to the drawings of this application is believed necessary, the Examiner is invited to contact the undersigned representative of the Applicant to discuss the same.

Next considering the Examiner's objection to a previously submitted amendment as introducing new matter into the disclosure of the invention, the Examiner has objected to the previously submitted amendment on the grounds that the amendment introduced the term

"single shift test step and individually shifting the elements" into the disclosure and that the term is not supported by the disclosure.

The Examiner has also rejected claims 15-27, under 35 U.S.C. § 112, under the same grounds, specifically stating that the language "single shift test step and individually shifting the elements" is not supported by the originally filed disclosure and the specification contains no description or explanation of how this test is employed.

In response to these grounds for objection to the disclosure and for rejection of the claims, the Applicant would like to first point out that the specific language the Examiner refers to, in claim 15, is "testing each of a plurality of shifting elements existing in the transmission wherein each shifting element is tested in a single test step" and, in claim 22, "testing each of a plurality of shifting elements existing in the transmission individually and successively, wherein each shifting element is tested in a single test step."

The actual terminology is thereby somewhat different from the phrase "single shift test step and individually shifting the elements" but clearly recites that the shifting elements of the transmission are tested in succession, that the shifting elements are tested individually, and that each shifting element is tested in a single test step.

In this regard, the Applicant respectfully disagrees with the Examiner's statement that these limitations are not supported by the disclosure as originally filed and that the specification contains no description or explanation in support of these limitations and how the limitations are employed in the present invention. The Applicant refers the Examiner, for example, to:

Paragraph [018] of the Specification wherein it is stated that: "[a]ccording to the invention the shifting element to be tested is caused to slip via the pressure-setting element and then closed again".

Paragraph [019] of the Specification wherein it is stated that: "[t]he characteristic quantity for the correct function of the shifting element tested is the setting element current at which the shifting element slips or the slip tends toward zero when it closes."; and

Paragraph [022] of the Specification wherein it is stated that: "[a]n essential advantage, specially for an error search and a localization of causes of error, consists in that in the course of the testing method the shifting elements to be tested can be successively engaged, that is, the already shifted shifting elements remain closed and the new shifting element to be tested is shifted with positive engagement." (Emphasis added.)

It is, therefore, the belief and position of the Applicant that the disclosure as originally filed fully and completely supports the recitations and limitations that the shifting elements are tested individually, noting that each time a shifting element is referred to it is referred to in the singular rather than the plural, that the shifting elements of the transmission are tested in succession, and that each shifting element is tested in a single test step wherein each element is "caused to slip via the pressure-setting element and then closed again" or "the slip tends toward zero when it closes."

Further in this regard, the Specification of the present Application as originally filed also fully describes and explains how the above discussed operations are employed in the present invention to determine qualities of the shifting functions and elements of a transmission, which may then be stored to adjust the in-use shifting functions of the transmission in a manner known in the art.. For example, the Application refers the Examiner to the Specification at:

Paragraph [017] of the Specification wherein it is stated that:

> There is further obtained the advantage that during the test of an automatic transmission with the inventive method, by eliminating the dynamic portions which were formerly required, the errors can be better detected whereby the quality of the driving comfort is further enhanced". By associating "adjusted current" with "transmitted torque" it is possible qualitatively to make very accurate statements about the quality of the shifting functions of the automatic transmission. Tolerances between the separate automatic transmissions of one and the same series can be compensated by a balance of tolerance with storing of the data in the electronic transmission control whereby the quality for the end product is still further improved.

Paragraph [019] of the Specification wherein it is stated that: "[t]he characteristic quantity for the correct function of the shifting element tested is the setting element current at which the shifting element slips or the slip tends toward zero when it closes.";

Paragraph [020] of the Specification wherein it is stated that: "[o]ne other characteristic quantity is the hysteresis of the current thresholds between the opening and closing of the shifting element, or the slip rotational speed of the shifting element, or also the torque transmitted to the torque-measuring hub.";

Paragraph [021] of the Specification wherein it is stated that: "[a]nother characteristic quantity is the filling time needed in order to shift with positive engagement a shifting element. The flow rate thus determined that is actually absorbed is a measure for the tolerance of the air play, for the pressure supply and for the detection of errors (porosities, throttle positions. . .)"; and,

Paragraph [023] of the Specification wherein it is stated that: "a characteristic quantity being determined and indicated or stored."

It is, therefore, the belief and position of the Applicant that the disclosure as originally filed both fully and completely supports the recitations and limitations regarding the testing of the shifting elements and the manner in which the resulting measured qualities of the shifting elements are employed in the present invention.

In order to advance the prosecution and gain allowance of this case, the Applicant offers the above submitted amendments to claims 15 and 22 wherein the relevant language of the claims is brought closer into conformity with the specific language of the Specification as originally filed. It is understood, however, that these amendments are made without any admission or concession regarding the adequacy, completeness or clarity of the disclosure of the present invention in the Specification as originally filed and without any express or implied additional limitation of the claims, and are submitted only to advance the prosecution and allowance of the present Application.

The Applicant therefore respectfully requests that the Examiner reconsider and withdraw all objections to the previously submitted amendment or to the Specification or claims under 35 U.S.C. § 132 as introducing new matter into the disclosure of the invention and all rejections of the claims under 35 U.S.C. § 112 under the grounds that the language of the claims is not supported by the originally filed disclosure and the specification contains no description or explanation of how this test is employed, and the allowance of the present Application and claims.

Next, the Examiner has rejected claims 22-27 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite with respect to the limitation reciting a "separate" torque measuring hub, and in particular with respect to the teachings of McKenzie et al. `979.

In this regard, and as discussed in detail in the previous Response wherein McKenzie et al. `979 was discussed in detail, the limitation of a "separate" torque measuring hub is intended to refer to the fact that, in the present invention, the transmission to be tested is upon a testing stand and the output shaft of the transmission is connected to a stationary torque measuring hub that attached to fixed part of a test bench associated with the test stand. The pertinent recitations of claim 22 that "the torque measuring hub is separate from the transmission, connecting an output shaft of the transmission with a separate stationary torque measuring hub mounted to a fixed part of the test bench and blocking the output shaft" therefore refers to the fact and limitation that the torque measuring hub is separate from the transmission and is essentially a part of the testing stand and test bench rather than a part of the transmission.

By way of contrast and illustration, the transmission output of the McKenzie et al. `979 system is connected to an actual vehicle power train through an actual vehicle parking brake interposed between the output shaft and the power train, as in a conventional vehicle. In this regard, and in further distinction between McKenzie et al. `979 and the present invention, it must be noted that the McKenzie et al. `979 system locks-up or blocks the transmission

output solely by application of the parking brake, rather than by means of a fixed torque measuring hub connected to the transmission output shaft. This is not only necessary in the McKenzie et al. `979 method, but cannot be done any other way because in the McKenzie et al. `979 method the transmission is operating in an actual vehicle with the transmission output shaft connected to the drive train so that there is no available point at which to insert a torque measuring hub, so that the McKenzie et al. `979 cannot even use a torque measuring hub.

In further illustration, the newly cited Gierer `948 reference teaches the use of a torque indicator 6, rather than a torque measuring hub, and teaches, at column 2, lines 39-41, that the torque indicator 6 is "a component part of the transmission output shaft 5" and thereby cannot be separate from the transmission.

Lastly, it must be noted that the use of a torque measuring hub separate from the transmission and fixed to a test stand and bench is fully supported by the Specification and drawings of the present Application as originally filed, such as at paragraphs [018] and [023] of the Specification and in Fig. 1, and as discussed in detail in the previous Response.

In order to advance the prosecution and gain allowance of the present Application, however, the Applicant offers the above submitted amendments to claim 22 whereby the recitation "connecting an output shaft of the transmission with a separate stationary torque measuring hub mounted to a fixed part of the test bench and blocking the output shaft" is further clarified by amendment to read "connecting an output shaft of the transmission with a [separate] stationary torque measuring hub <u>separate from the transmission</u> and mounted to a fixed part of the test bench and blocking the output shaft". It is understood, however, that these amendments are made without any admission or concession regarding the adequacy, completeness or clarity of the disclosure of the present invention in the Specification as originally filed and without any express or implied additional limitation of the claims, and are submitted only to advance the prosecution and allowance of the present Application.

The Applicant, therefore, respectfully requests that the Examiner reconsider and withdraw all rejections of claims 22-27, under 35 U.S.C. 112, as being indefinite and allow claim 22 and dependent claims 23-27 as amended herein.

Next considering the rejections of the claims over the cited prior art, the Examiner has rejected claims 15, 19-22, 26 and 27 under 35 U.S.C. § 102(b) as being anticipated by Gierer `948. The Applicant acknowledges and respectfully traverses the raised anticipatory rejection in view of the following remarks.

Once again briefly considering the present invention as recited in claims 15 and 22 as amended herein above, the present invention is directed to a method for testing the function of an electrohydraulically controlled automatic transmission upon a test bench by simulating a vehicle operation. According to the present invention as recited in claims 15 and 22, an input shaft of the transmission is connected to a driving source having preset rotational speeds and load ratios and an output shaft of the transmission is connected with a stationary torque-measuring hub that is separate from the transmission and that is mounted to a fixed part of the test bench and that blocks the output shaft. The shifting elements of the transmission are tested successively to determine a characteristic quantity of each shifting element with each shifting element being shifted while others of the shifting elements remain closed and the characteristic quantity being determined at a slip of the shifting element or a decrease of a slip of the shifting element.

It is, therefore, apparent that the present invention as recited in claims 15 and 22 and thus in claims 16-21 and 23-27 are fully distinguished over the teachings of Gierer `948 for a number of fundamental reasons. For example, according to the present invention the output torque of the transmission is measured by connecting the output shaft of the transmission with a stationary torque-measuring hub that is separate from the transmission and that is mounted to a fixed part of the test bench and that blocks the output shaft. In complete contrast from the present invention Gierer `948 teaches, at column 2, lines 39-41, the use of a torque indicator 6

that is "a component part of the transmission output shaft 5" and that therefore cannot be separate from the transmission.

In further distinction between the present invention and the teachings of Gierer `948, the present invention tests one shifting element at a time with all of the other shifting elements of the transmission being held in the unactivated state while the one shifting element is being tested. In fundamental contrast from the present invention, and as described at column 2, lines 48-54, the system of Gierer `948 tests gearshifting operations wherein each gearshift operation involves at least a pair of shifting elements with one shifting element, that is, a clutch, opening while another clutch closes. In fundamental contrast from the system of the present invention, therefore, the Gierer `948 system therefore cannot and does not determine a quality of one shifting element alone and separate from the qualities of other shifting elements.

In a still further fundamental distinction of the present invention from the teachings of Gierer `948, the system of the present invention determines a quality of a shifting element by means of a single test in which the shifting element is activated or engaged to a point where the shifting element either begins to slip or the slip of the shifting element begins to decrease toward zero, with the quality of the shifting element being measured at that point. In contrast from the present invention, the Gierer `948 determines a quality or qualities of the shifting elements involved in a shifting operation by driving the involved shifting elements through an entire shifting operation such as is described in column 3, lines 10-44. As stated therein, the testing operation through an entire shifting operation by the method of Gierer `948 will include the rapid filling operation, the charge pressure filling, and the raising of the charge pressure to the point the shifting elements are actuated. In complete contrast from Gierer `948, the method of the present invention involves only a single step performed on a single shifting operation.

It is, therefore, the belief and position of the Applicant that the present invention as recited in claims 15, 19-22, 26 and 27 is fully and patentably distinguished over and from the teachings of Gierer `948 under the requirements and provisions of 35 U.S.C. § 102(b).

The Applicant, therefore, respectfully requests that the Examiner reconsider and withdraw all rejections of claims 15, 19-22, 26 and 27 as amended herein over Gierer `948 under the requirements and provisions of 35 U.S.C. § 102(b), and allow claims 15, 19-22, 26 and 27 as amended herein.

Next, considering the Examiner's rejection of claims 16-18 and 23-25 under 35 U.S.C. § 103(a) over Gierer `948 in view of McKenzie et al. `979, it must first be noted that claims 16-18 and 23-25 are dependent from claims 15 and 22 and as such incorporate by dependency all recitations and limitations of claims 15 and 22. It is therefore the belief and position of the Applicant that claims 16-18 and 23-25 are distinguished over and from the teachings of Gierer `948 for the same reasons as discussed above with regard to claims 15 and 22.

Gierer `948 has been discussed above in detail and the above discussion of Gierer `948 is incorporated into the following discussion of McKenzie et al. `979 alone and/or Gierer `948 in view of McKenzie et al. `979.

Referring to McKenzie et al. `979, it is the belief and position of the Applicant that the present invention as recited in claims 15 and 22 and in claims 16-18 and 23-25 is fully distinguished over and from the teachings of McKenzie et al. `979 for a number of fundamental reasons.

For example, McKenzie et al. `979 does not teach a method of calibrating clutches in a transmission by simulating vehicle operation. That is, in the present invention the operation of a vehicle is truly simulated in that the transmission is tested on a testing stand and is driven by a driving source that, because the transmission is mounted on a testing stand, is not and cannot be a vehicle or a vehicle power unit, so that the driving machine thereby truly simulates the input from a vehicle. In this regard, it should also be noted that the specification of the present application also states that the driving source is of lesser power than a conventional vehicle engine, so that the driving machine is not and cannot be a conventional vehicle engine.

This feature, therefore, further supports the fact that in the present invention the transmission is mounted on a testing stand that simulates operation in a vehicle.

In contrast from the present invention, and as clearly described at, for example, column 3, lines 8 to 19 and lines 46 to 67, column 4, lines 9 to 22 and 46 to 67, column 5, line 54 to column 6, line 24 of McKenzie et al. `979, the McKenzie et al. `979 method employs an actual vehicle with the transmission mounted in and operating in the vehicle to test the transmission. The McKenzie et al. `979 method thereby does not and cannot mount the transmission on a testing stand and does not and cannot connect the transmission output to a fixed torque measuring device mounted on a fixed part of a test bench.

Further support for this distinction between the present invention and McKenzie et al. `979, and in further distinction between the present invention and McKenzie et al. `979, it is described and recited in the present application and claims thereof that the transmission output shaft is connected to a stationary or fixed torque measuring hub that is separate from the transmission and that simulates a vehicle power train and that blocks or locks-up the transmission output shaft, rather than to an actual vehicle power train.

In fundamental contrast from the method of the present invention, the transmission output of the McKenzie et al. `979 system is connected to an actual vehicle power train through an actual vehicle parking brake interposed between the output shaft and the power train, as in a conventional vehicle. In this regard, and in further distinction between McKenzie et al. `979 and the present invention, it must be noted that the McKenzie et al. `979 system locks-up or blocks the transmission output solely by application of the parking brake, rather than by means of a fixed torque measuring hub connected to the transmission output shaft. This is not only necessary in the McKenzie et al. `979 method, but cannot be done any other way because in the McKenzie et al. `979 method the transmission is operating in an actual vehicle with the transmission output shaft connected to the drive train so that there is no available point at which

to insert a torque measuring hub and, as a result, no other way than the parking brake to lock-up the transmission output shaft.

In still further distinction between the present invention and the teachings of McKenzie et al. `979, the method of the present invention detects and measures torque output of the transmission by means of the fixed torque measuring hub connected between the transmission output shaft and a fixed part of the test bench. In fundamental contrast from the present invention, and as described at, for example, column 4, lines 9-23, the McKenzie et al. `979 method senses the behavior of the transmission solely by means of the conventional, standard speed sensors that are internal to the transmission and by selected other sensors connected, for example, to indicate the engine speed output.

This distinction is again mandated by the completely fundamental distinction between the present invention and the McKenzie et al. `979 method in that in the present invention the transmission is not in a vehicle and is not even connected to other vehicle components, but is instead mounted on a testing stand with the transmission output shaft connected to a torque measuring hub connected to a fixed part of a test bench. In contrast from the present invention, and as discussed herein above, the McKenzie et al. `979 method requires that the transmission to be tested be mounted and operating in a vehicle, that is, connected from a vehicle engine through a torque converter and having a transmission output shaft connected through a parking brake to the vehicle drive train. As such, and as also discussed herein above, the McKenzie et al. `979 method must employ already existing speed sensors in the transmission and cannot use any form of torque measuring hub connected from the transmission output shaft. This requirement is mandated because it is impossible to connect a torque measuring hub to a transmission output shaft when the transmission is mounted and operating in a vehicle and the output shaft is connected through a parking brake and to the drive train.

A yet further basic distinction between the present invention and the teachings of McKenzie et al. `979 is in the test methods themselves, including the test procedures, the reason and purpose of the test procedures and the means by which the tests are controlled and performed.

By way of background, it is well understood that a hydraulically actuated automatic transmission is comprised of a plurality of shifting element that include gear elements providing different gear ratios and a plurality of clutch elements engaging and disengaging the gear element to provide the desired transmission gear ratio and direction. The shifting elements are in turn selectably and controllably engaged and disengaged by hydraulic pressures controlled by electric currents controlling valves.

According to the present invention, the effect of the engaging or disengaging of each transmission shifting element depends upon the type of shifting element and is indicated by a change in slip through the transmission when the shifting element begins to engage or disengage which, in turn, is reflected in the torque transmitted through the transmission. For example, the activation of a shifting element that is disengaged, or "open", when unactivated and that engages, or "closes", when activated will typically result in a decrease in transmission slip. That is, the slip will begin to decrease from some initial value when the shifting element first actually begins to engage and will tend to decrease towards zero slippage as the degree of shifting element engagement increases. The activation of a shifting element that is engaged, that is, "closed", when the shifting element is unactivated and that disengages, or "opens", when the shifting element is activated will typically result in an increase in transmission slip. That is, the slip will begin to increase from some initial value when the clutch element first actually begins to engage and will increase toward some greater value as the degree of shifting element disengagement increases.

This operation is recited in the claims as a basic principle, such as in claims 15 and 22 by the statement "actuate the shifting elements out of an opened condition to the extent

necessary to determine, indicate and store a desired shifting element characteristic", and more specifically in, for example, claims 16 and 23 by the statement "at which the shifting element slips and a point at which the shifting element slip tends toward zero when the shifting element closes".

It must also be noted, in this regard, that the object of the present invention is to determine the control current levels corresponding to the control pressures at which the individual shifting elements begin to engage or disengage, that is, the current levels and control pressures at which the individual shifting elements are functionally actuated, or become functionally unactuated.

It is, therefore, apparent that there are yet further basic, fundamental distinctions between the present invention and the teachings of McKenzie et al. `979.

In a first fundamental distinction between the present invention and McKenzie et al. `979, is that McKenzie et al. `979 teaches that the transmission should be mounted in and connected into a vehicle and controlled by the electronic transmission controller of the vehicle, while the present invention teaches and claims that the transmission should not be in or connected into a vehicle, but should instead be mounted onto a testing stand and test bench.

The method of McKenzie et al. `979, however, not only teaches away from the present invention in testing a transmission in a vehicle rather than on a testing stand and test bench, but results in very fundamental differences between the method of the present invention and the method taught by McKenzie et al. `979. For example, in the method of the present invention the transmission is mounted on a testing stand and the tests are performed and controlled tests by a transmission test control unit so that each shifting element can be and is tested individually and independently of all other shifting elements of the transmission.

In fundamental contrast from the method of the present invention, McKenzie et al. `979 teaches that the transmission is to be tested in a vehicle and that the tests are controlled by the

standard vehicle transmission control unit. This, in turn, means that the tester can select and initiate a test only on the basis of a shifting operation as seen by the driver of a vehicle. That is, the tester has access only to the standard transmission controls, such as a shift lever, and can only tell the transmission control unit to shift, for example, from second gear to third gear or from a forward to a reverse gear. As is well known and understood, each such shifting operation will typically involve several shifting elements that will operate concurrently or in overlapping sequence to perform the indicated shifting operation. As such, it will be essentially impossible in the McKenzie et al. `979 method to test each shifting element individually and separately from the other shifting elements. Stated another way, in the McKenzie et al. `979 method it is possible to test only the combinations of shifting elements employed in the conventional shifting operations of the vehicle, rather than the individual shifting elements. In addition, and as a consequence of this limitation in the McKenzie et al. `979 method, the test of a given shifting operation will result only in data pertaining to a group of shifting elements and the test will not and cannot provide data pertaining to a single shifting element, which makes it difficult to determine any required adjustments for a given shifting element. Once again, McKenzie et al. `979 teaches directly away from and contrary to the present invention.

In yet another basic distinction between the present invention and the teachings of McKenzie et al. `979, the method of the present invention requires and executes only a single test step for each shifting element. In the single test step for a given shifting element, an activation control pressure is applied to the selected shifting element and is increased until the shifting element is activated, as indicated by a change in the transmission slip as represented by a change in the output torque of the transmission, at which point the control pressure and control current to the valve are noted and stored for later use. As described above, the activation of shifting element and the corresponding change in the transmission slip may be indicated by either the start of an increase in the slip from some initial value or the start

of a change in the slip from some initial value due to the start of a trend in the slip towards zero slip.

In complete contrast from the method of the present invention, the method taught by McKenzie et al. `979 requires the performance of a sequence of test steps for each gear shifting operation wherein, as described, as gear shifting operation typically involves the activation or deactivation of a group of shifting elements. In each such sequence, each test step requires a three stage application of a test pressure to the shifting elements involved in the selected gear shift operation and, for example, monitoring of the internal speed of the transmission by means of internal speed sensors to determine whether the clutches involved in the gear have reached the filled state. In this regard, it must be noted that the three stage application of test pressure in each test step involves an high level pressure pulse, that is, a rapid fill pulse, followed by a lower pressure filling pressure, followed finally by a return to zero pressure. The test steps of each sequence of test steps, and the three stages in each step, are repeated with increasing pressures until the clutch or clutches reach the filled state, with the pressures required to achieve the filled state comprising the sought for data regarding transmission performance.

McKenzie et al. `979, therefore, not only teaches an entirely different procedure for testing a transmission than does the present invention, but tests only groups of shifting elements that are defined by each given gear shift operation rather than individual shifting elements, thereby testing an entirely different mechanism than does the present invention.

It is apparent that McKenzie et al. `979 teaches an entirely different method of testing of a transmission than does the present invention, and uses entirely different testing means and an entirely different testing setup and to entirely different results for a basically different purposes than the present invention. McKenzie et al. `979 thereby teaches not only an entirely different testing method than does the present invention, but also effectively teaches directly away from and contrary to the present invention in essentially every aspect of both the present invention and the method taught by McKenzie et al. `979.

It is therefore apparent that the present invention as recited in claims 15 and 22 and in claims 16-18 and 23-25 is fully and patentably distinguished over and from the teachings of McKenzie et al. `979 under the requirements and provisions of 35 U.S.C. 103 for the reasons discussed above.

Next considering the combination of Gierer `948 in view of McKenzie et al. `979 under 35 U.S.C. § 103, it is apparent that neither Gierer `948 nor McKenzie et al. `979 teach or even suggest essential aspects of the present invention in any form, so that the combination of Gierer `948 in view of McKenzie et al. `979 will likewise lack any teachings or suggestions regarding these aspects of the present invention as recited in claims 15 and 22 and in claims 16-18 and 23-25.

For example, neither Gierer `948 nor McKenzie et al. `979 teach or suggest the use of a torque measuring hub separate from the transmission to measure certain qualities of the transmission. Instead, one employs the power train of the vehicle in which the transmission resides while the other employs a torque indicating device that is a component of the transmission itself. In this regard, it must be noted that Gierer `948 and McKenzie et al. `979 in fact teach directly away from each other because one teaches that the transmission must be test while installed in a vehicle while the other teaches that the transmission must not be mounted in a vehicle but must be mounted in a test stand. In this regard, therefore, Gierer `948 and McKenzie et al. `979 cannot be combined because they teach in opposite directions.

In further distinction, neither Gierer `948 nor McKenzie et al. `979 teach or suggest the testing of one shifting element at a time and in succession while all other shifting elements are held in the closed state, thereby allowing the qualities of each of the shifting elements to be separately determined. In fundamental contrast from the present invention, both Gierer `948 and McKenzie et al. `979 teach the use of multi-step test procedures essentially duplicating complete multi-element gearshift operations of the transmission, including the operation of all shifting elements involved in each complete gearshift operation

In still further distinction, neither Gierer `948 nor McKenzie et al. `979 teach or suggest the testing of each shifting element in a single test step wherein the shifting element is activated until either a slip or a decrease in slip in the shifting element occur, whereupon the quality of interest of the shifting element is measured. In fundamental contrast from the present invention, both Gierer `948 and McKenzie et al. `979 teach the use of multi-step test procedures essentially duplicating complete multi-element gearshift operations of the transmission.

It is, therefore, apparent that the present invention as recited in claims 15 and 22 and in claims 16-18 and 23-25 is fully and patentably distinguished over and from the teachings of Gierer `948 and of McKenzie et al. `979 and of Gierer `948 in view of McKenzie et al. `979 under the requirements and provisions of 35 U.S.C. § 103.

The Applicant, therefore, respectfully requests that the Examiner reconsider and withdraw all rejections or potential rejections of claims 15 and 22 and in claims 16-18 and 23-25 over Gierer `948 and/or McKenzie et al. `979 and over Gierer `948 in view of McKenzie et al. `979, under the requirements and provisions of 35 U.S.C. §§ 102 and 103, and allow claims 15, 22, 16-18 and 23-25 as amended herein.

If any further amendment to this application is believed necessary to advance prosecution and place this case in allowable form, the Examiner is courteously solicited to contact the undersigned representative of the Applicant to discuss the same.

In view of the above amendments and remarks, it is respectfully submitted that all of the raised rejection(s) should be withdrawn at this time. If the Examiner disagrees with the Applicant's view concerning the withdrawal of the outstanding rejection(s) or applicability of the Gierer `948 and/or McKenzie et al. `979 references, the Applicant respectfully requests the Examiner to indicate the specific passage or passages, or the drawing or drawings, which contain the necessary teaching, suggestion and/or disclosure required by case law. As such teaching, suggestion and/or disclosure is not present in the applied references, the raised rejection should be withdrawn at this time. Alternatively, if the Examiner is relying on his/her

expertise in this field, the Applicant respectfully requests the Examiner to enter an affidavit substantiating the Examiner's position so that suitable contradictory evidence can be entered in this case by the Applicant.

In view of the foregoing, it is respectfully submitted that the raised rejection(s) should be withdrawn and this application is now placed in a condition for allowance. Action to that end, in the form of an early Notice of Allowance, is courteously solicited by the Applicant at this time.

The Applicant respectfully requests that any outstanding objection(s) or requirement(s), as to the form of this application, be held in abeyance until allowable subject matter is indicated for this case.

In the event that there are any fee deficiencies or additional fees are payable, please charge the same or credit any overpayment to our Deposit Account (Account No. 04-0213).

Respectfully submitted,

Michael J. Bujold, Reg. No. 32,018
Customer No. 020210
Davis & Bujold, P.L.L.C.
Fourth Floor
500 North Commercial Street
Manchester NH 03101-1151
Telephone 603-624-9220
Facsimile 603-624-9229
E-mail: patent@davisandbujold.com